



THE Agricultural Situation

OCTOBER 1949

Volume 33 Number 10

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[The AGRICULTURAL SITUATION is sent free to crop and price reporters in connection with their reporting work]

Editor: Wayne Dexter

A monthly publication of the Bureau of Agricultural Economics, United States Department of Agriculture, Washington, D. C. The printing of this publication has been approved by the Director of the Budget, February 4, 1949. Single copy 5 cents, subscription price 50 cents a year, foreign 70 cents, payable in cash or money order to the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

HOW LIVING DIFFERS IN RURAL AND URBAN COUNTIES



Living Items	Counties with Farm Population of:				
	80% & over	60%-80%	40%-60%	20%-40%	Under 20%
 Births in Hospitals 1946	28%	47%	69%	81%	93%
 Hospital Beds per 100,000 Population 1946	45	131	231	359	432
 Physicians per 100,000 Population 1946	31	44	57	73	112
 Dentists per 100,000 Population 1946	10	19	30	38	60
 Adults with 5 or More Years of School 1940	65%	74%	83%	86%	87%
 Adults Who Have Completed High School 1940	10%	14%	20%	23%	27%
 Farm Dwellings with Electricity 1945	19%	27%	44%	56%	68%
 Farm Dwellings with Telephone 1945	6%	17%	34%	36%	42%
 Farm Dwellings with Radio 1945	49%	61%	70%	73%	75%
 Farm Dwellings with Running Water 1945	7%	11%	21%	32%	47%

BAE 47387-X

Farm Living Varies With Distance to City

THE FARTHER farmers live from the city, the lower their level of living is likely to be.

This is one of the main conclusions of a recent study of the Bureau of Agricultural Economics. It was made to find out just how adequately the needs of farm families with respect to health, education, household facilities, and living conditions generally were met in the 3,971 counties of the United States.

Some of the results of the study are shown in the table on the opposite page. It shows that the larger the proportion of farm people in a county, the fewer are the modern services and conveniences that are likely to be available to them.

Lack Medical Facilities

The availability of modern services and conveniences in rural communities determines to a large extent the level of living of farm families in those communities, regardless of their income. For example, for each 100,000 population in the most rural counties of the country in 1946—those in which farm people made up 90 percent or more of the population—there were only 29 physicians, 8 dentists and 20 hospital beds. One hundred counties in the United States did not have a single medical doctor while 897 did not have a general hospital.

In the most urban counties, on the other hand, there were 120 physicians per 100,000 population, 64 dentists and 396 hospital beds. Of the 120 physicians in these counties, 53 were specialists. There were no specialists in the most rural counties.

Clearly, farm families living in counties where the number of physicians, dentists, and hospital beds is low are definitely limited in the improvement which they can make in their health situation even though they greatly increase their incomes.

Medical attention at birth and the use of hospital facilities for confinements are closely related to the number of doctors and hospitals available. In the most rural counties, only a little more than a fourth of all births in 1946 occurred in hospitals compared with 94 percent in the most urban counties. The proportion of births attended by physicians ranged from only two-thirds in the most rural counties to practically 100 percent in the most urban.

Although the use of medical care at time of birth is still much lower in rural than urban counties, rural areas have made considerable progress in recent years. Since 1937, the rise in the proportion of births in hospitals has been more marked in rural areas than in urban where it is approaching 100 percent.

Education is another field in which rural communities have been at a disadvantage compared with cities. In rural counties, teachers' salaries generally are low, school buildings inferior and the number of pupils per teacher high. In the most rural counties of the country, only 8 percent of the population 25 years or older have completed high school compared with 27 percent in the most urban counties. Many more adults also have had 4 years of college in urban communities than in rural. At the other end of the scale, a slightly larger proportion of farm people than city people have had no schooling.

Lag Despite Gains

Farm homes still lag far behind city homes in the use of household facilities such as electricity, telephones, radios and running water despite considerable gains in the last several years. Furthermore, the larger the proportion of farm people in a county's population, the fewer of these facilities that are likely to be found in farm homes. (See table on p. 2.) This also is true of many

community services such as retail and wholesale establishments, barber and beauty shops, cleaning and pressing shops, laundries, automotive repair and service shops, circulating libraries and eating and drinking places.

One of the most important trends is the striking decrease in the number of general stores in rural communities along with the increase in retail food stores and filling stations. This points to a rising standard of living among rural people which is calling forth increased specialization on the business side of the community. However, the highly rural counties still are far from being equal with the more urban counties in this respect.

On practically all items covered in this study the situation is unfavorable for farm people living in counties where they make up a large proportion of the population. These differences in rural and urban levels of living are not due so much to the fact that these people live on farms but rather to the fact that they live a distance from cities. Many of the services and facilities en-

tering into modern standards of living require a fairly high degree of community organization, either private or public. This is obviously true for educational and health facilities. It is equally true for many facilities used in the farm home. For instance, whether or not a farm housewife uses an electric iron depends on whether the farm is supplied with electricity. This in turn depends on whether there is an organization in the community able to supply electricity.

Community services in cities are much more developed than in rural areas and farmers living near cities usually benefit from them. Farmers living in more rural areas are unable to acquire these services until the proper community organizations have been established. Thus, the way to better conditions of life for farm people and to bring about parity of living with city people may lie in improving their local community organization.

T. Wilson Longmore

Grace L. Flagg

Bureau of Agricultural Economics

Irrigation Adds New Farms in Desert Area

GROUND WATER developments have increased the irrigated acreage in the arid part of Texas lying west of the Pecos river about 40 percent during 1948 and 1949. This is the only significant increase in cropland in the area in a quarter century although irrigation of dry farm land already under cultivation on the high plains has increased considerably.

Ground-water developments in this area are so expensive that few individuals have been able to undertake them without financial aid. However, favorable postwar cotton prices have drawn investment capital into the region.

The investment in land, well construction, land clearing and leveling is approximately \$150 per acre. Unlike other pump irrigated areas of Texas, development must take place before farming beings. For the average farm, the investment is about \$55,000, not including amounts spent for farm implements, fencing or buildings.

Land development in the trans-Pecos region this year and last has brought about 68,000 acres of new land into production. One hundred sixty-one new farms have been added and the average acres of cropland per farm has been increased from 197 to 366.

Most of the new acreage was planted to cotton this year. This more than doubles the acreage normally planted to this crop in the whole trans-Pecos region.

Further farm land development in this area probably will come at a slower rate. Capital for new development is becoming less plentiful. Under favorable circumstances, the prospective irrigator can still obtain financial aid, but interest rates and repayment schedules are not likely to be as favorable as they have been. Possible overdevelopment of ground-water supplies and a changed outlook for agricultural prices are not encouraging to further investment.

William F. Hughes

Bureau of Agricultural Economics

Sheep Industry Competes Best When Conditions Are Difficult

EVENTS of the last few years make one wonder whether the sheep in this country are going the way of the buffalo and the passenger pigeon.

On January 1, 1942, the United States had 56 million sheep and lambs, the largest number on record. On January 1, 1949, we had 32 million, the lowest number in our history. This was the biggest decline ever recorded for any kind of livestock in a 7-year period. We now have only one sheep for every five persons but in 1867, we had more sheep than people.

Production of meat from sheep has not gone down as much as the number of sheep. Because of changed practices, for each head of sheep on farms on January 1 we now produce annually about 60 percent more meat than we did a generation ago. Nevertheless, only 4 pounds of lamb and mutton per person is being consumed in 1949—scarcely more than half the peak rate of 1912 and the lowest in the 50 years for which we have records. The chances are that the 1949 rate is the lowest since our colonial days.

There's nothing in the outlook to indicate that our grandchildren or great-grandchildren are going to have to go to the zoo to see a sheep. On the other hand, there also is nothing to indicate that the sheep industry will regain fully the prominent place it once held.

Industry Follows Frontiers

Development of the sheep industry in the United States closely followed the advances of the frontiers, west from the Atlantic and east from the Pacific. The number of sheep probably hit its peak in the East about the middle of the Nineteenth century. The high for the Pacific coast came as early as 1877. In Texas, however, expansion began only 30 years ago, and the peak did not come until 1943. This expansion accounted for most of the rise in the United States number up to 1942,

and carried Texas to a leading position among sheep-raising areas.

Sheep compete best under difficult physical and economic circumstances. With their close-cutting teeth, agile legs, and durable digestion, sheep can feed on pastures that are too rough or poor for cattle. To the extent that sheep have a natural advantage over cattle for certain lands, including fence rows of the east as well as the rougher range of the west, their numbers will be maintained. This much seems clear.

Must Be Profitable

But if the industry is to be large, sheep must be able to compete for land and labor where their natural advantage is not so pronounced. In other words, they must be at least as profitable as other enterprises.

In hill pastures of the east and in most of the west, sheep compete with cattle for land. In western Ohio and neighboring States they utilize waste forage and contend not so much for land as for the farmer's labor, especially during lambing season. In these Corn Belt areas, the increasing mechanization of farming and the generally high value placed on labor probably will discourage any great revival of sheep raising.

A prewar study in Montana showed that over long periods, sheep and cattle yield about equal returns to comparable range land. But in shorter periods there are big variations.

One cause of the short-run variations in returns between sheep and cattle is the difference in the make-up of their costs. Sheep usually yield higher gross returns compared with investment in land, buildings, and equipment than do cattle. However, sheep require considerably more care than cattle. Costs for labor and other current operating expenses of sheepmen usually average higher compared with investment than those of cattlemen. In addition, prices

of lamb, mutton, and wool often lag behind those of the products from cattle when farmers' prices generally are rising and falling. As a result, the sheep industry may not be favored quite as much during a general price rise, but may also be less sensitive to a decline.

The 1940's are a case in point. New opportunities lured away sheep herders and wages went up fast for those remaining. More important, neither lamb nor wool prices went up as much as those of beef. The difference in the increases for lamb and beef were small. Lamb sold at Chicago in 1948 averaged a little less than three times prewar prices while beef was up just over three times. Prices of wool, though, were only 40 percent higher in 1948 than prewar, and sheepmen who received 35 percent of their income from wool before the war found their returns from the fleece only 22 percent in 1948. As a result, sheep raisers prospered less during many of those years than did cattlemen.

The picture has changed a little in 1949. Lambs fared better than other meat animals during the price declines of 1948 and prices of lambs are now relatively higher. Wool prices are averaging above last year.

The number of sheep seems to be turning, too. Slaughter of sheep and lambs this year may total 3½ million

less than the 17½ million for 1948, with ewes showing the largest percent reduction. The number of sheep at the end of 1949 will be close to those at the beginning. It is possible that this will be the first year since 1941 not to show a decline.

If the sheep population soon begins a slow increase, production of lamb and mutton would not turn upward until several years later, since farmers would have to withhold breeding stock from the market to rebuild herds. As a consequence, prices of lambs are likely to remain high compared with other livestock for a fairly long period.

The United States sheep population is not again likely to reach the 1942 level. However, some decline in costs and improved price relationships may favor some increase. In case of an economic depression, the sheep industry may fare better than the cattle industry and the number of sheep might rise considerably. Based on the experience of the 1930's, prices of lambs probably would drop more slowly than those of cattle. Wool prices in this wool-deficit, wool-importing nation probably would decline even less. All in all, it seems to be a characteristic of the sheep enterprise that returns mount less during booms, but hold up a little better during economic declines.

Harold F. Breimyer
Bureau of Agricultural Economics

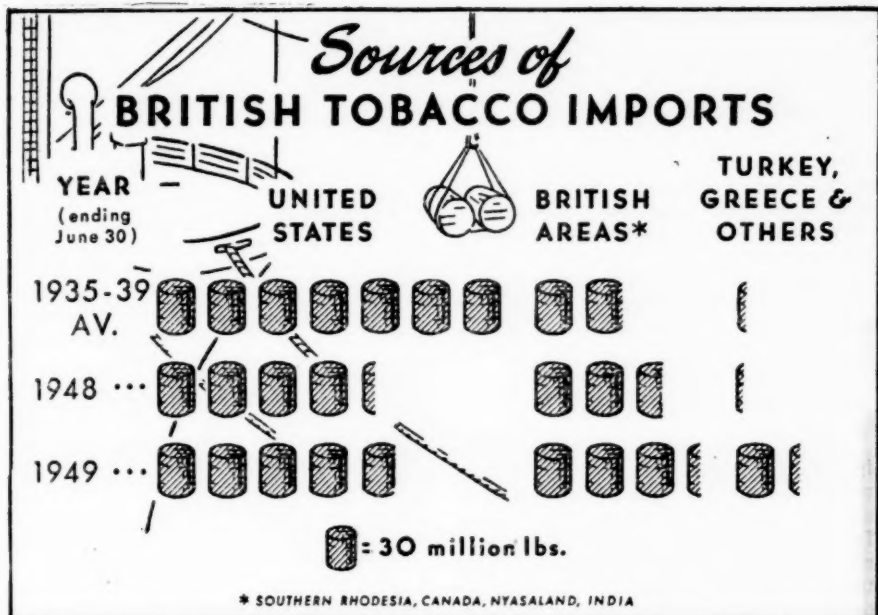
Find Ways To Reduce Apple Bruising

WAYS to materially reduce damage to apples from bruising during picking, handling, and packing were found by plant scientists of the United States Department of Agriculture in a study at Wenatchee, Wash., under the Research and Marketing Act.

Bruising can be reduced during harvesting and packing, but the most fertile field for bruise reduction is in the packing house.

Growers can reduce bruising by close supervision of picking operations, and by handling apple boxes on pallets. Only one-fifth as much bruising was found when apple boxes were handled on pallets as when handled separately. Loose apples also were bruised less when handled on pallets.

Scientists found bruising damage greater after apples were taken to the packing line than in the combined operations of picking, hauling, and handling. Dumping, dropping from one level to another on conveyer belts, and hitting various parts of moving equipment accounted for the greatest number of bruises. Apples dumped into a water bath showed fewer bruises than those carefully dumped on a canvas belt as it passed over a solid surface. New style machines with dumping table and washer progressor on the same level caused fewer bruises than old type machines. The importance of having the various parts of moving equipment accurately timed was emphasized.



B A E 47383-XX

Britain Taking Less Tobacco but Is Still Our Best Customer

THE UNITED KINGDOM has reduced her takings of United States tobacco far below prewar levels. But she still is buying more from us than any other nation and is likely to continue to do so for some time.

Chiefly responsible for the reduction in British imports of American tobacco, is the difficulty Britain is having in finding dollars to pay for goods she buys from us. To save dollars that otherwise would go for tobacco, Britain has taken two major steps: (1) She has drastically increased import taxes on tobacco which has raised prices to British consumers and reduced consumption; and (2) she has increased imports from other areas which will accept British sterling in payment.

The first postwar increase in British import taxes on tobacco came in April 1947 with a further small increase occurring a year later. British manufacturers and importers of leaf tobacco

paid, before the pound was devalued, an equivalent of \$11.41 to \$11.93 per pound, with duties for tobacco from preferential areas of the Commonwealth 2 to 3 percent lower than the full duty rate. The tobacco revenues collected by the British Government in 1948-49 amounted to the equivalent of \$2,434,000,000, or one-sixth of total tax revenues. More than three-fourths of the money British consumers spend for tobacco goes to the government.

The increase in the tariff upped retail prices about 50 percent above 1946 and reduced consumption. Prices are now about 4 times prewar. Last year, the United Kingdom with a population one-third that of the United States spent an equivalent of about \$3,111,000,000 for tobacco products. United States consumers used about five times as much tobacco but spent only \$4,000,000,000.

British home consumption of tobacco has declined since the import duties were increased but is still above prewar levels. Just before World War II, consumption of tobacco in Britain ranged between 180 and 190 million pounds a year. In addition, close to 40 million pounds was imported for manufacture into tobacco products for export. Tobacco consumption increased during the war to a peak of 250 million pounds in 1946, not including amounts exported, or used by overseas forces and ship stores. Cigarettes are by far the principal form of tobacco use.

Consumption Drops

In 1948, after the new taxes had been in effect, British home consumption was down to 214 million pounds. British exports of cigarettes and other manufactured tobacco in 1948 were down an eighth from the 1946 peak but at 45 million pounds were up about an eighth over the late thirties. Since the war ended, more than nine-tenths of Britain's tobacco exports have been cigarettes compared with 60 to 65 percent before the war.

During the first half of 1949, British home consumption of tobacco was close to that of a year earlier, while exports were about 8 percent higher.

Although the United States continues to be the chief supplier of tobacco for Britain, our share of Britain's total imports has dropped considerably. From 1924 to 1938, about 40 percent of the tobacco we produced was exported with Britain usually taking a third to a half. Most of the British takings were flue-cured because of the strong preference of British consumers for this tobacco.

During 1948-49, the United States shipped 151 million pounds of tobacco to Britain compared with 127 million pounds in 1947-48 and an average of 210 million pounds for the 1935-39 fiscal years. Nearly all of the tobacco shipped to Britain in 1948-49 was flue-cured.

ECA played an important role in financing British purchases in 1948-49 and also will be a major factor in 1949-50 when British expenditures for leaf tobacco are expected to be near 90 million dollars. The declared value of exports to Britain in 1948-49 was

81 million dollars. Since prices of 1949 crop flue cured have been running moderately below last season, it seems likely that around 170 million pounds of tobacco may be shipped to Britain in 1949-50. Devaluation of the pound is not expected to greatly affect our exports to Britain this fiscal year.

Our share of the British tobacco market was down to a little more than half in 1948-49 compared with 80 percent before the war. On the other hand, the proportion supplied by other areas in the British Commonwealth and Turkey increased.

Imports from Southern Rhodesia increased more than those from any other Commonwealth area and in 1948-49 made up 14 percent of total imports compared with 6 percent before the war. The British manufacturers have agreed to take two-thirds of the Southern Rhodesian crop for 5 years.

Imports from Turkey in 1948-49 became significant for the first time, amounting to 25 million pounds or 9 percent of total imports. From 1920 to 1947, imports from Turkey usually were less than 3 million pounds and never exceeded 6 million pounds. British cigarette manufacturers are now including Turkish tobacco in cigarettes for home consumption. The great majority of these were previously made exclusively from flue-cured tobacco.

Stocks Are Low

The increase in tobacco imports from other areas since 1946-47 was not large enough to offset the drop in imports from the United States. As a result, British stocks are very low in view of the fact that both British home consumption and exports are above prewar. In 1937 and 1938, Britain carried stocks of around 490 million pounds. By the end of June 1949, stocks were down to about 325 million.

The increase in British imports from other areas reduces the amounts needed from the United States. However, the United States is likely to continue to be the most important single source for tobacco since the quantities of flue-cured available elsewhere are insufficient to meet British requirements.

Arthur G. Conover
Bureau of Agricultural Economics

Crop Insurance Program Being Built on County Mutual Basis

MOST farm production is insured from the time it leaves the farm until it reaches the consumer. But the period of by far the greatest risk on the "farm-to-consumer" production line is while the crop is under the open sky and subject to uncontrollable natural hazards—and during this period most of our farm production has lacked any form of insurance protection.

Federal crop insurance offers a farmer protection of the investment he makes in producing a crop against loss from unavoidable causes such as weather, insects and plant diseases. It does not insure the profit the farmer expects from his investment. The offer is strictly on a business basis. Crop insurance premiums paid by the farmer are an addition to his costs of production.

Program to Expand

Federal crop insurance is not yet available to all farmers or on all commodities. In 1949, the Federal Crop Insurance Corporation was authorized to insure wheat investments in 200 counties, cotton in 56, flax in 50, corn in 50 and tobacco in 35.

New legislation permits the number of counties in which these commodity investments may be insured to be expanded by 50 percent of the 1949 authorization in each of the next 4 years. In addition, the multiple crop plan under which the investment in several crops is insured under one policy can be expanded to 50 counties in 1950 from the 7 in which the plan operated in 1949, and 25 counties can be added in each of the next 3 years. The trial program on dry edible beans can be expanded to 20 counties in 1950 from the 9 with insurance this year, and 10 counties can be added in each of the next 3 years.

The programs in the counties are on a mutual basis. Both the counties and the individuals who are insured benefit directly from favorable loss experiences.

In effect, the farmers in each county are building their own local crop insurance business. The Government stands behind them in the event that years of heavy losses come before their business has built reserves large enough to cover such losses.

Farmer-Committees

Federal crop insurance programs are administered locally by county farmer-committees. These committees establish coverage and rate areas—areas of similar productivity and risk of loss which have the same coverage and premium rate per acre. They screen out the land and individuals that are deemed too high risk to be covered under sound county operations. The committees conduct sales campaigns that determine the number of producers who will be insured the following year. This, of course, determines how widely the risk is spread throughout the county. The committees also obtain the acreage reports, collect premiums and send reports of damage or loss to the State FCIC director who handles adjustments and prepares loss claims for payment.

Premiums Vary

A minimum reserve requirement is established for each county. Whenever accumulated premiums paid exceed the losses paid in the county plus the required reserve, insured producers receive a premium adjustment the following year in direct proportion to the excess reserve. The county premium rate is periodically adjusted in line with the county's experience so that eventually the cost of the protection will be determined entirely from actual county experience. This means that favorable loss experience comes back to the county in terms of lower cost protection.

Favorable experience is also recognized on an individual basis. An in-

sured producer receives a 25 percent premium reduction when he has had seven consecutive years of crop protection without being paid an indemnity or when the premiums he has paid exceed losses paid to him by an amount equal to his coverage for the current year. Many wheat producers already are getting these premium reductions.

To obtain the protection in counties where crop insurance is available, the farmer must sign an application. If his application is approved he is issued a crop insurance policy. For most insured crops, the policy continues in force from year to year unless it is canceled by the producer or the Corporation.

The policy protects the farmer's investment from planting through harvest with the protection increasing as the investment in the crop increases. Most of the commodities insured have three stages of progressive protection—substitute crop, unharvested, and harvested. The coverage for cotton is established in four stages. The coverage for unharvested acreage is slightly below the maximum coverage for harvested acreage and the lowest coverage applies when acreage is released by the Corporation at the producer's request and planted to a substitute crop.

The "Insurance Unit"

The protection is provided on an insurance unit basis. An insured producer may have one or more units depending upon his operation. All insured acreage with the same owner and operator forms an insurance unit so an operator could have as many units as he has landlords and the landlord as many units as he has operators.

The amount of protection is determined by the number of acres in the unit, the coverage per acre established for the land, and the stage of production reached by the insured acreage. The insured producer reports his plant-

ed acreage promptly after planting is completed.

An indemnity is paid the producer whenever the production from an insurance unit falls below the coverage due to unavoidable causes. The policy does not protect the producer against himself. It does not cover loss due to negligence or poor farming practices.

Indemnities are paid promptly by Government check after the Corporation's adjuster visits the farm on which the loss is reported, determines the amount of indemnity due and the loss claim is signed by the insured producer. The producer reports any material damage to the crop when it occurs and any loss promptly after harvest so that losses can be inspected and adjusted promptly.

Operating in "Black"

Premiums are earned when the crop is planted. For the convenience of farmers with financing problems, however, the premium note falls due about harvest time. However, producers who pay their premiums before a specified date are given a 5-percent discount.

Under sound operations, the Federal crop insurance program should collect premiums in excess of losses paid in good crop years and pay losses in excess of the year's premium income in poor crop years. In 1947, when wheat, cotton, and flax insurance was offered on a national basis, total crop insurance premiums exceeded losses paid by about \$10,000,000. In 1948, with the same county limitations on program operations as 1949, premiums exceeded losses paid by about \$5,500,000, with every insured commodity operating in the "black." The experience of these 2 years indicates that a sound basis for offering this protection is being developed.

Earl H. Nikkel
Federal Crop Insurance Corporation

Delicious Apples IN CHICAGO FROM WASHINGTON STATE

Costs Paid by Consumers

PER DOLLAR
to Farmer

26¢

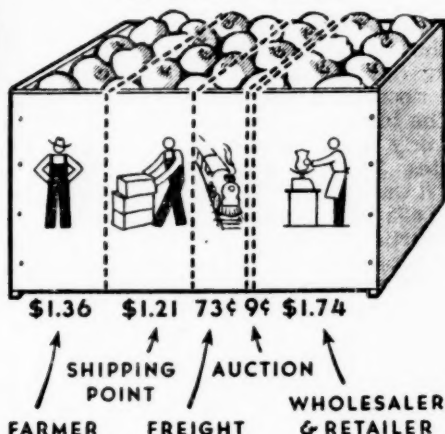
to Marketing System

74¢

1947-48
SEASON

PER BOX

RETAIL SALES PRICE \$5.13



BAE NEG. 47328-X

SERVICES involved in marketing Washington Delicious apples in Chicago take about 74 cents out of each consumer dollar according to a recent study by BAE and the State College of Washington under the Research and Marketing Act.

As the chart above shows, Washington apple growers received about 26 cents out of each dollar Chicago consumers spent for their product during the 1947-48 season. Out of this, growers paid costs of production and harvesting as well as the cost of hauling the apples to the packing plant.

For the study, a typical marketing channel was used in which apples were hauled to the packing house by the grower who kept title to them until they were sold.

Shipping-point charges which averaged \$1.21 of the average retail price of \$5.13 for each box of apples included costs of washing, packing, warehousing, cold-storage, and selling. However, there was considerable variation in these charges among the various packers. These services helped pro-

duce salable, packaged fruit from the loosely packed orchard-run apples received at the packing plant. Moving apples from orchards to packing plants cost farmers an average of 11 cents for each packed box.

Here is the break-down of the \$1.21 shipping-point charge: Packing, 46 cents; box and lid, 38 cents; warehousing and storage, 21 cents; handling and selling, 13 cents; and miscellaneous charges, 3 cents. The latter includes 1½ cents a box for the Washington State Apple Advertising Commission for advertising and related expenses; nine-tenths of a cent for Federal-State inspection, and one-tenth of a cent for discounting drafts at the bank and nearly half a cent for other expenses.

Nearly all of the Washington apples sold in Chicago were shipped in by rail. During the 1947-48 season, railroad rates were increased three times and reduced slightly once. Average freight costs per box were 73 cents.

H. H. Reizenstein
Bureau of Agricultural Economics

Tung Nuts

Output Soars in Last Decade

RAPID increases in production of farm products have been common in the last decade, but few agricultural industries can match the record of American tung nut producers.

The tung tree, a native of China, is a fairly recent arrival in the United States. It was first introduced in 1902 but it was not until 1929 that tung nuts and oils were produced commercially. Production of tung nuts increased from about 60 tons in 1929 to about 1,200 tons in 1939 and about 67,000 tons in 1948. Output of tung oil rose from less than half a million pounds from the 1939 crop to nearly 20 million pounds from the 1948 crop.

Imported tung oil from China still is our main source of supply. Imports have fluctuated widely from year to year. In 1947 and 1948 imports totaled over 120 million pounds. Prewar imports varied, mainly because of conditions in China, from about 75 million pounds to about 175 million pounds annually.

War Cut Off China

In World War II, the Japanese conquests in the Pacific cut off our imports of tung oil from China. At the same time wartime requirements of industry created a strong demand for the product. Tung oil was reserved during most of the war for exclusive use in military products, notably paints and electrical insulating materials for military equipment. Wartime prices of tung oil, at ceilings, were more than double the 1935-39 average. Season average prices to producers for tung nuts ranged from \$90 to \$102 per ton compared with \$42 for the 1939 crop and \$60 for the 1940 crop.

During the war, a Government program was set up to stimulate maximum production of tung nuts from existing orchards. Growers were paid up to \$5 per acre on tung nuts if they carried out certain production practices. The

need for tung oil also was considered by the Selective Service in granting occupational deferments for operators and workers on tung groves.

Soil and climatic requirements of tung trees are exacting. The trees need about 60 inches of rain a year, a semi-acid soil and well drained land with the water table about 22 feet below the surface. Even a little frost in early spring will kill the flower buds, which bloom before the leaves come out. As a result, tung trees are grown successfully only within a 100-mile-wide belt along the Gulf of Mexico from eastern Texas to northern Florida. Expansion of the industry in this belt was encouraged by a large acreage of cut-over land available at low prices. In 1948, Mississippi produced 43 percent of the national crop of tung nuts, Louisiana, 28 percent, and Florida, 25 percent. Georgia and Alabama each produced 2 percent.

About Size of Apple Tree

A full-grown tree is about the same size as a large apple tree and has a spread of about 45 feet. At present, growers are planting an average of about 65 trees to the acre.

Tung nuts may be as large as an apple. However, nuts between 2 and 3 inches in diameter are desirable because they have less hull in proportion to the kernel, which contains the oil.

The major use of tung oil in the United States is in paints and varnishes. Tung oil is also used in linoleum, printing inks, insulation and other industrial products. Tung oil paints dry rapidly and form a hard, water-resistant film. Only a few other oils have these properties, including dehydrated castor oil, produced from imported Brazilian castor beans, and oiticica oil imported from Brazil. The main domestic oils competing with tung oil are linseed and soybean oils. In 1938, 130 million pounds of tung oil were used in drying-

oil products compared with 595 million pounds of linseed oil, 162 million pounds of soybean oil, 58 million pounds of dehydrated castor oil, and 13 million pounds of oilseeds oil.

Unofficial estimates indicate that the number of tung trees is still increasing. The Agricultural Census of 1945 indicated about 9½ million trees compared with about 350,000 in 1930. New varieties of tung trees begin to bear nuts in commercial quantities about 3 years after planting, and with good practices the yield per tree increases until trees are 12-15 years old. Since a large percentage of tung trees are young, a strong upward trend in production of tung nuts is likely for a good many years.

Prices of tung nuts and tung oil have declined materially from the wartime peaks. From the high of \$162 per ton for the 1944 crop, the season average price received by farmers for tung nuts dropped to about \$55 for the 1948 crop. Tung oil prices were at the ceiling of 39 cents per pound (drums, carlots, New York) during most of the war but began to decline in early 1947 and reached a low point of 21 cents per pound in April 1949. In September 1949, the price averaged about 27 cents per pound. The 1935-39 average was 16.7 cents per pound.

Price Support

Government price-support programs were in effect for domestic tung nuts and tung oil from 1944, 1945, and 1947 crops. Market prices in 1944 and 1945 were at or above support levels.

Future price prospects for tung oil are uncertain. War in China this year, which has resulted in a sharp decline in imports of tung oil, has tended to keep the price of tung oil up. Uncertainty about Chinese supplies in the future will continue to affect the domestic market. Also, trends of industrial activity will play an important part in the price picture, since the total quantity of drying oils used in this country, and hence the demand for tung oil, are tied closely to the level of industrial production.

Edgar L. Burtis
Sidney Gershen

Bureau of Agricultural Economics

Outlook Highlights

... October 1949

Business Activity Improves

Business conditions took a bullish turn in the last few weeks. After declining consistently for several months, industrial production turned upward in August and was continuing to gain in early September. This was accompanied by a sharp rise in nonfarm employment.

Improved economic conditions are expected to keep consumer demand for food and other farm products strong the rest of the year. Prices to farmers are averaging only slightly lower than last spring despite large farm production. Government price support programs have helped stabilize the farm price level. However, further slight declines in the over-all average are likely.

Land Value Decline Spreads

The downtrend in farm land values that first showed up in Western States early this year, has now spread throughout the Eastern States. As the second half of 1949 began, land values for the whole country averaged 1 percent below a year earlier—the first time since 1939 the average has been below that of a year earlier.

Cotton Mill Demand Strengthens

As a result of an increase in new orders from textile manufactures and a rise in grey cloth prices, domestic mill demand for cotton is expected to increase moderately. For several months, mills have been buying cotton chiefly to meet immediate requirements.

Export demand for cotton has not been as high as a year earlier.

The United States cotton supply for 1949-50—including a crop estimated at 14,943,000 bales, carry-over of 5,283,000 bales, and imports of 200,000 bales—is expected to be about 20 million bales compared with 17.9 last season.

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

Commodity	5-year average		Sept. 15, 1948	Aug. 15, 1949	Sept. 15, 1949	Parity price, Sept. 15, 1949
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.97	1.79	1.87	2.14
Rye (bushel).....do.....	.720	.554	1.39	1.20	1.27	1.74
Rice (bushel).....do.....	.813	.742	2.16	2.02	1.70	1.97
Corn (bushel).....do.....	.642	.691	1.78	1.18	1.16	1.55
Oats (bushel).....do.....	.399	.340	.687	.582	.613	.966
Barley (bushel).....do.....	.619	.533	1.08	.968	1.05	1.59
Borghorn grain (100 pounds).....do.....	1.21	1.17	2.16	1.87	1.80	2.93
Hay baled (ton).....do.....	(1)	11.20	22.70	20.80	21.00	30.01
Cotton (pound).....cents..	12.4	10.34	30.94	29.32	29.70	54.60
Cottonseed (ton).....dollars..	22.55	27.52	68.10	44.40	43.50	52.32
Soybeans (bushel).....do.....	3.96	3.951	2.45	2.60	2.14	11.6
Peanuts (pound).....cents..	4.8	3.55	10.4	10.2	10.2	4.09
Flaxseed (bushel).....dollars..	1.69	1.69	5.74	3.56	3.63	1.77
Potatoes (bushel).....do.....	4.607	.717	1.53	1.54	1.38	2.12
Sweetpotatoes (bushel).....do.....	.878	.807	2.32	2.67	2.30	2.32
Apples (bushel).....do.....	.96	.90	2.44	1.94	1.82	3.62
Oranges on tree (box).....do.....	2.29	1.11	1.96	.78	.66	17.60
Hogs (hundredweight).....do.....	7.27	8.38	27.40	19.40	19.90	13.10
Beef cattle (hundredweight).....do.....	5.42	6.56	23.30	19.40	20.00	16.30
Veal calves (hundredweight).....do.....	6.75	7.80	25.50	22.10	22.40	14.20
Lambs (hundredweight).....do.....	5.88	7.79	23.30	21.20	21.60	63.6
Butterfat (pound).....cents..	26.3	29.1	75.6	60.5	61.7	3.87
Milk, wholesale (100 pounds).....dollars..	1.60	1.81	5.02	3.86	3.99	27.6
Chickens (pound).....cents..	11.4	14.9	31.9	25.1	24.4	52.0
Eggs (dozen).....do.....	21.5	21.7	51.4	48.8	52.5	44.3
Wool (pound).....do.....	18.3	23.8	48.4	46.4	46.9	

¹ Prices not available during base period.

² Comparable base price, August 1909-July 1914.

³ Comparable price computed under the Stagall amendment.

⁴ 1919-28 average of \$1.12 per bushel used in computing parity.

⁵ 1919-28 average for computing parity price.

⁶ Revised.

⁷ Preliminary.

Dairy Markets to Stay Firm

The sharp price decline that hit the dairy industry in the closing months of 1948 is not likely to be repeated this year. Outlook is for stable prices for some items, slightly rising prices for others. Average for the dairy product group is likely to rise a little more this fall. However, prices of all items are expected to be below same period of 1948.

So far in 1949, export, storage and consumer demand for dairy products has been weaker than in the same months of 1948. By mid-September, Government had purchased about 92 million dollars worth of dairy products for price support.

Larger Feed Stocks Expected

With more livestock on farms, consumption of feed concentrates in 1949-

50 is likely to exceed that of the 1948-49 season. However, consumption is not likely to equal production this year. As a result, carry-over of feed grains, particularly corn, at the end of the 1949-50 season is likely to again increase.

Wheat Prices Advance

Wheat prices have advanced considerably since July 1. In mid-September, the price of No. 2 Hard Winter at Kansas City was within 6 cents of the loan.

Wheat exports were light in July and August, totaling 68.5 million bushels compared with 112 million a year earlier when they were unusually heavy. Recently exports have been increasing. Sales by the United States under the International Wheat Agreement totaled 7.2 million bushels through September 16.

(Continued on p. 16)

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Total income of industrial workers (1935-39=100) ²	1910-14=100					Index of prices received by farmers (August 1909-July 1914=100)			
			Average earnings of factory workers per worker	Wholesale prices of all commodities ³	Prices paid by farmers		Farm wage rates ⁴	Livestock and products			
					Com-modities	Com-modities, interest, and taxes		Dairy products	Poul-try and eggs	Meat ani-mals	All live-stock
1910-14 average	58	50	100	100	100	100	100	100	101	101	101
1915-19 average	72	90	152	158	151	150	148	148	154	163	158
1920-24 average	75	122	221	160	161	173	178	159	163	123	142
1925-29 average	98	129	232	143	155	168	179	160	155	148	154
1930-34 average	74	78	179	107	122	135	115	105	94	85	93
1935-39 average	100	100	199	118	125	128	118	119	109	119	117
1940-44 average	192	238	325	139	150	147	212	162	146	171	169
1945 average...	203	291	403	154	180	172	350	197	196	210	204
1946 average...	170	275	392	177	202	193	378	242	198	256	243
1947 average...	187	332	440	222	246	231	408	269	221	340	293
1948 average...	192	364	475	241	264	250	432	297	236	371	320
1948											
September.....	192	380	484	247	265	250	-----	302	253	408	343
October.....	195	378	488	242	263	249	427	289	260	373	323
November.....	195	376	489	239	262	248	-----	284	272	351	313
December.....	192	374	493	237	262	248	-----	283	260	339	305
1949											
January.....	191	362	489	234	260	248	438	275	240	330	295
February.....	189	354	486	231	257	245	-----	264	218	315	280
March.....	184	346	481	231	258	246	-----	254	217	335	287
April.....	179	340	473	229	258	246	416	240	221	333	282
May.....	174	332	474	227	257	245	-----	234	217	328	277
June.....	169	-----	-----	⁵ 226	257	245	-----	230	213	331	277
July.....	162	-----	-----	224	256	244	425	236	214	324	275
August.....	-----	-----	-----	223	254	243	-----	243	226	317	276
September.....	-----	-----	-----	-----	253	242	-----	249	237	326	284

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Parity ratio ⁶	
	Crops							All crops and live-stock		
	Food grains	Feed grains and hay	To-bacco	Cotton	Oil-bearing crops	Fruit	Truck crops			All crops
1910-14 average	100	101	102	96	98	99	-----	99	100	100
1915-19 average	193	164	187	168	187	125	-----	168	162	108
1920-24 average	147	126	192	189	149	148	7 143	160	151	89
1925-29 average	140	119	172	145	129	141	140	143	149	89
1930-34 average	70	76	119	74	72	94	106	86	90	66
1935-39 average	94	95	175	83	106	83	102	97	107	84
1940-44 average	123	119	245	131	159	133	172	143	154	103
1945 average	172	161	366	171	215	220	224	201	202	117
1946 average	201	195	382	228	244	226	204	226	233	121
1947 average	271	246	380	261	335	194	249	261	278	120
1948 average	250	249	387	259	326	157	238	250	287	115
1948										
September	223	223	406	250	282	185	150	231	290	116
October	226	192	418	251	270	174	176	227	277	111
November	234	181	412	246	283	157	186	224	271	109
December	236	184	415	239	283	164	209	228	268	103
1949										
January	232	187	412	236	274	180	282	238	268	108
February	221	173	412	235	244	181	285	233	258	105
March	224	178	411	232	242	189	263	232	261	106
April	227	178	410	241	238	207	236	236	260	106
May	227	174	411	242	231	215	213	234	256	104
June	212	168	412	243	219	211	175	225	252	103
July	207	171	412	243	205	194	185	220	249	102
August	204	166	407	236	225	160	174	212	245	101
September	210	167	400	240	213	143	205	211	249	103

¹ Federal Reserve Board represents output of mining and manufacturing; monthly data adjusted for seasonal variation.

² Computed from data furnished by Bureau of Labor Statistics and Interstate Commerce Commission on pay rolls in mining, manufacturing, and transportation; monthly data adjusted for seasonal variation. Revised August 1948.

³ Revised.

⁴ Bureau of Labor Statistics.

⁵ Monthly data adjusted for seasonal variation.

⁶ Ratio of prices received to prices paid for commodities, interest and taxes.

⁷ 1924 only

Outlook Highlights

(Continued from p. 14)

Potatoes Above Support

Potatoes grown in the 29 late States are expected to bring farmers prices near those of 1948 and considerably above the 60 percent of parity support level. The crop in these States is about a fifth smaller than last year.

Sweetpotato prices also are expected to average above the support level of 80 percent of parity. The crop is estimated at 4 percent larger than last year but 18 percent below average.

Fresh Vegetable Prices Up

Production of most fresh vegetables this fall is considerably below last year. Prices for the next few months are expected to average moderately higher than in the autumn months of 1948.

Lowest in 7 Years

With production a near record and movement to processors slow, deciduous fruit prices this summer dropped to the lowest levels since 1942. Prices may not drop much more but will continue lower than in the fall of 1948.

Lemons and Grapefruit Higher

Unfavorable weather has reduced supplies of lemons and grapefruit. As a result, prices are likely to continue generally higher this fall than last. Prices for California Valencia oranges, on the other hand, probably will continue lower than last fall. The percentage of small-sized fruit in the crop is relatively high.

Poultry Prices Down Sharply

Poultry prices received by farmers have been running sharply lower than a year ago. In mid-September, the national average was 7½ cents lower than on September 15, 1948.

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